

- 36 -

Abstract

Fiber Optic Sensor Systems

A fibre optic sensor system comprises at least one
5 measuring sensor 1 providing an optical output dependent
upon one or more parameters to be measured, e.g.
temperature, and at least one reference sensor 2
providing a reference output for comparison with the
measuring sensor output. The reference sensor is
10 provided in a birefringent fibre.

The system includes a detecting means 13,14 whereby
a reference beat signal f_2 is derived by measuring the
optical frequency splitting between frequency components
15 in different polarisation planes of the reference sensor
output. A further beat signal f_1 is generated between
the measuring and reference sensor outputs, such beat
signals being used to derive a measurement of one or
more parameters.